CLAIMS

[0059] What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. A method of compressing a series of digital images comprising:

   arranging said images in an ordered series from 1 to n wherein n is the last image in said series;
   subtracting the value of each pixel of each of images 2 to n from its corresponding pixel in an adjacent image to form subtracted images 2 to n;
   adjusting the pixel value to zero for pixels of each of subtracted images 2 to n having absolute values of less than a predetermined threshold value; and
   compressing said images of said series 1 to n using a compression algorithm to form compressed images.

2. A method of decompressing the compressed images of claim 1, comprising:

   reconstructing the compressed images of claim 1 using an associated decompression algorithm to form thresholded images; and
   adding each pixel from each of the thresholded images 2 to n with the corresponding pixel in its adjacent reconstructed or original image 1 to (n-1).

3. The method of claim 1 wherein said adjacent image is a reconstructed image.

4. The method of claim 1 wherein said threshold value is adjusted such that said threshold value is less than a noise tolerance threshold for said pixels of each subtracted image.

5. The method of claim 4 wherein said threshold value is adjusted to the maximum possible value that satisfies a normal distribution test for said pixels of each subtracted image.

6. The method of claim 1 wherein said digital images are aligned with respect to each other.

7. The method of claim 1 further comprising applying a noise reduction filter to one or more images.

8. A method of storing images compressed in accordance with claim 1, comprising encoding said images in a storage format and storing said images in a storage medium.

9. The method of claim 8, wherein said storage format is selected from the group consisting of AVI, Bitmap, DICOM, GIF, TIFF, JPEG, MPEG, or PNG, or Windows Media.

10. The method of claim 8, wherein said storage medium is selected from the group consisting of fixed disk drives, magnetic disks, optical disks, magneto-optical disks, random access memory, flash memory, or cache memory.

11. A method of transferring images compressed in accordance with the method of claim 1, comprising encoding said images in a transfer format, providing said images to an image source system, transferring the images from the image source system through an image transfer mechanism to an image receiving system.

12. The method of claim 11, wherein said transfer format is selected from the group consisting of TCP/IP, IPX/SPX, NetBEUI, ATM, or 802.11.

13. The method of claim 11, wherein said transfer mechanism is selected from the group consisting of network, Internet, telephone line, satellite, wireless, microwave, or fibre.

14. A computer system for compressing a series of digital images, the computer system comprising:

a computer processor;
memory for storing a series of digital images; and
logic embodied on a computer readable medium, including computer executable instructions for arranging said images in an ordered series from 1 to n wherein n is the last image in said series; subtracting value of each pixel of each of images 2 to n from its corresponding pixel in an adjacent image to form subtracted images 2 to n; adjusting the pixel value to zero for pixels of each of subtracted images 2 to n having absolute values less than a predetermined threshold value to create thresholded images; and compressing

said image 1 and the said thresholded images 2 to n using a compression algorithm to form compressed images.

15. A computer system for decompressing a series of digital images, the computer system comprising:

a computer processor;
memory for storing a series of digital images; and
logic embodied on a computer readable medium, including computer executable instructions for reconstructing the compressed images of claim 1 using an associated decompression algorithm to form thresholded images; adding each pixel from each of thresholded images 2 to n with the corresponding pixel in its adjacent reconstructed or original image 1 to (n-1).